



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,382	10/22/2001	Harry Buhay	1637A1	7176
7590	05/21/2004		EXAMINER	
Andrew C. Siminerio, Esq. PPG Industries, Inc. One PPG Place Pittsburgh, PA 15272			BARR, MICHAEL E	
			ART UNIT	PAPER NUMBER
			1762	
DATE MAILED: 05/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/007,382	BUHAY ET AL.
<b>Examiner</b>	<b>Art Unit</b>	
Michael Barr	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
od for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

us

1)  Responsive to communication(s) filed on 09 April 2004.  
a)  This action is FINAL.                            2b)  This action is non-final.  
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-37 is/are pending in the application.  
4a) Of the above claim(s) 10-37 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-3 and 6-9 is/are rejected.  
7)  Claim(s) 4 and 5 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## lication Papers

9)  The specification is objected to by the Examiner.

0)  The drawing(s) filed on 22 October 2001 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

1)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

riority under 35 U.S.C. § 119

2)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### hment(s)

Notice of References Cited (PTO-892)  
Notice of Draftsperson's Patent Drawing Review (PTO-948)  
Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/02, 11/02.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_ .

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, Claims 1-9 in Paper filed 4/9/2004 is acknowledged. The traversal is on the ground(s) that there is not serious burden on the examiner to examine all the claims in a single application. This is not found persuasive because there is a serious burden on the examiner to search all of the claims in the application, as there are several independent and distinct inventions as set forth in the previous office action. Each independent and distinct invention would require a different search and differing prosecution concerns which go well beyond those of the other independent and distinct inventions claimed and thus the examination of all of the independent and distinct inventions claimed in a single application would create a serious burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 10-37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper filed 4/9/2004.

### ***Drawings***

3. The drawings are objected to because Fig. 7 is missing. The specification describes the presence of a Fig. 7, but no Fig. 7 could be located in the drawings submitted. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Gallego et al.

Gallego et al. teaches providing a substrate with a low emissivity layer and then applying an overlayer on the low emissivity layer, which increases the emissivity (Col. 2, line 62-Col. 3, line 15). Such a teaching reads on the requirements of Claims 1 and 9. With respect to Claim 2, the heating merely reads on exposure to the heat from changes in temperature in the surrounding environment, which would inherently occur.

6. Claims 1-2, 6-7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Rancourt et al.

Rancourt et al. teaches providing a substrate with a spacer layer having low emittance and then applying an absorber layer, which provides an increased emissivity, wherein the substrate and absorber layer can both be SiO<sub>2</sub> and a index of refraction of 1.45 (Col. 2, lines 14-66; Col. 3, lines 3-65). Such a teaching reads on the requirements of Claims 1, 6 and 9. Rancourt et al. also teaches that the absorber layer be 0.25 microns in thickness (Col. 3, lines 48-

52). With respect to Claim 2, the heating merely reads on exposure to the heat from changes in temperature in the surrounding environment, which would inherently occur.

7. Claims 1-3 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Balian et al.

Balian et al. teaches providing a glass substrate with a conductive layer, then applying an alumina layer at a 70 nm thickness, and then heat treating, where the emissivity of the stack comprising the conductive and alumina layers is greater than without the alumina layer (Examples 1 and 5). Such a teaching reads on the requirements of Claims 1-3 and 9. With respect to Claim 8, Balian et al. does not specifically teach the index of refraction of the alumina layer. However, since Balian teaches a coating material having the claimed composition and thickness properties, it would have been expected that the alumina coating layer would also inherently have the claimed refractive index properties.

8. Claims 1-2 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Medwick et al.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Medwick et al. teaches providing a substrate with a low emissivity coating layer and then a high emissivity layer, and then heat treating (Claims 64-67). Such application of the high emissivity layer would have inherently increased the emissivity value of the coating stack.

***Allowable Subject Matter***

9. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter:  
None of the prior cited or reviewed by the examiner teaches or fairly suggests the claimed coating process, where the coating material comprises the claimed concentrations of silica and alumina.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Barr whose telephone number is 571-272-1414. The examiner can normally be reached on Monday-Thursday 6:00 am-3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Barr  
Primary Examiner  
Art Unit 1762

MB  
May 4, 2004

A handwritten signature in black ink, appearing to read "MB" followed by a surname, is written over a horizontal line.